



# Individual Beverage Chiller (IBC)



The Individual Beverage Chiller is a small, self-powered device that will provide soldiers with cool, refreshing beverages on-demand, anywhere on the battlefield. It interfaces with both the canteen and the water bladder.

## Why is it Needed?

Soldiers need to drink more than a gallon of water a day to stay hydrated in hot environments. When their canteens or hydration bladders get hot, the water becomes unpalatable, leading to reduced consumption and an increased risk of dehydration and serious injury. The current solutions of distributing ice or refrigerated bottled water are expensive and logistically challenging.

## Technology:

The IBC, currently being developed under the Small Business Innovative Research (SBIR) program, works by utilizing the cooling effect of evaporating water. A small portion of the beverage is evaporated and adsorbed by a hydrophilic salt that can hold its weight in water. This causes the evaporator to become cold, transferring the heat from the beverage to the adsorbent and the environment. The result is a compact device that can cool 32 oz. of water by 20°F in less than 10 minutes. The device can also be reused by drying out the salt by using heat from a squad stove or field oven.

## Key Features / Benefits:

**Reduced Logistical Burden...**The IBC dramatically reduces the demand for ice and refrigerated bottled water in the field.

**Reusable...**This solid-state device is rechargeable with heat so it can be used over and over again.

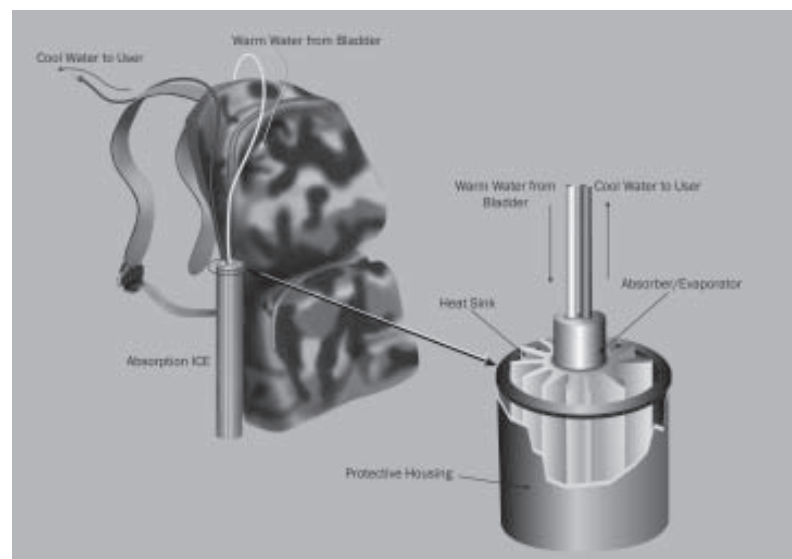
**Chill On-The-Move Capability...**Designed to integrate with the hydration bladder, the IBC can be activated while stowed, and dispense chilled beverage through the drink tube.

## Point of Contact:

### DoD Combat Feeding

Phone: COMM (508) 233-4401,  
DSN 256-4401

E-Mail: [amssb-rcf@natick.army.mil](mailto:amssb-rcf@natick.army.mil)



**NATICK  
SOLDIER  
CENTER**

Kansas St.  
Natick, MA  
01760  
[nsc.natick.army.mil](mailto:nsc.natick.army.mil)

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